

#Exercise 3-1\

$\{1,2,3\}, \{1,2,4\}, \{1,2,5\}, \{1,3,4\}, \{1,3,5\}, \{2,3,4\}, \{2,3,5\}, \{3,4,5\}$ \

list all candidate 4 items:\

$\{1,2,3\} = \{1,2,3,4\}, \{1,2,3,5\}$ \

$\{1,2,4\} = \{1,2,4,5\}$ \

$\{1,2,5\} =$  no new extensions\

$\{1,3,4\} = \{1,3,4,5\}$ \

$\{1,3,5\} =$  no new extensions\

$\{2,3,4\} = \{2,3,4,5\}$ \

$\{2,3,5\} =$  no new extensions\

$\{3,4,5\} =$  no new extensions\

pruning: remove  $\{1,2,4,5\}$  (vi har ikke 2,4,5), remove  $\{2,3,4,5\}$  (fordi vi har ikke 2,4,5), remove  $\{1,3,4,5\}$  (vi har ikke 1,4,5).\

result is highlighted\

#Exercise 3-3\

##Closed Frequent Itemsets\

An itemset X is closed if none of its

immediate supersets has exactly the same support as

X.\

An itemset is a closed frequent

itemset (w.r.t. some  $\sigma$ ) if it is a closed itemset and is

frequent (w.r.t.  $\sigma$ ).\

CFI support 4:  $\{A\} \{B\} \{C\} \{CD\} \{ACE\}, \{AB\}, \{ACD\}$ \

CFI support 2:  $\{ABCD\}, \{ABCE\}$  (ikke rigtig)\